U.S. DEPARTMENT OF COMMERCE
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110

# SEARCH REQUEST FORM

Requestor's Name: Michael Astorino  Serial Number: 09/027670

Date: 3/25/99  Phone: 306-9067  Art Unit: 3736

**Search Topic:**

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevent citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevent claim(s).

Inventors:

(Jim E. Riviere), Tomás Martin-Jimenez, Ronald E. Baynes, 3 Arthur L. Craigmill.

FYI.

Including claim 19 and Abstract for STIC Search Request as an aid to searcher.

Subject:

Finding Residue in Land Based Animals Derivation Food. Residue levels are also known as tolerance, tolerance levels or MRL. Residues are created when Drug(s) given to Animal(s), and the Animal Tissues (Cells) Muscle(s) or Organs) use up the drugs. The time it takes for the tissue to sufficiently use up drug(s)/compound → is the Withdrawal Time (AKA. Withdrawal Interval.)

* NOTE: P.5 of the BIOSIS File, the Applicant/Inventor is found.

## STAFF USE ONLY

Date completed: April 7, 1999
Searcher: T. Saunders
Terminal time: 45 min.
Elapsed time:
CPU time: 12.6 min.
Total time: 165
Number of Searches: 2
Number of Databases: 4

**Search Site**
- ✓ STIC
- CM-1
- Pre-S

**Type of Search**
- N.A. Sequence
- A.A. Sequence
- Structure
- Bibliographic

**Vendors**
- IG
- ✓ STN
- Dialog
- APS
- Geninfo
- SDC
- DARC/Questel
- Other

PTO-1590 (9-90)

Astorino, Michael/0902

```
L14       177978 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOFTWARE# OR COMPUTER? OR
                 ARTIFICIAL INTELLIGENCE
L26          896 SEA FILE=BIOSIS ABB=ON  PLU=ON  DRUG(2A)RESIDUE#
L37          579 SEA FILE=BIOSIS ABB=ON  PLU=ON  (ANIMAL# OR TISSUE# OR CELL#
                 OR MUSCLE# OR ORGAN#) AND L26
L38            9 SEA FILE=BIOSIS ABB=ON  PLU=ON  L14 AND L37

=> d all 1 3 4 5 7 8 9


L38  ANSWER 1 OF 9  BIOSIS  COPYRIGHT 1999 BIOSIS
AN   1998:484877  BIOSIS
DN   PREV199800484877
TI   Multiresidue supercritical fluid extraction method for the recovery at low
     ppb levels of three sulfonamides from fortified chicken liver.
AU   Maxwell, Robert J. (1); Lightfield, Alan R.
CS   (1) U.S. Dep. Agric., Agric. Res. Serv., Eastern Regional Res. Cent., 600
     E. Mermaid Lane, Wyndmoor, PA 19038 USA
SO   Journal of Chromatography B, (Sept. 18, 1998) Vol. 715, No. 2, pp.
     431-435.
     ISSN: 0378-4347.
DT   Article
LA   English
AB   A supercritical fluid extraction (SFE) method is proposed for the recovery
     of three sulfonamides from chicken liver. Samples were extracted at 680
     bar and 40degreeC using unmodified carbon dioxide and were collected free
     of co-extracted artifactual material on an in-line neutral alumina sorbent
     bed. High recoveries of sulfamethazine (SMZ), sulfadimethoxine (SDM) and
     sulfaquinoxaline (SQX) were obtained from chicken liver samples fortified
     at levels from 1000 to 50 ppm.
CC   Pharmacology - Drug Metabolism; Metabolic Stimulators  *22003
     Comparative Biochemistry, General  *10010
     Biochemical Methods - General  *10050
     Biochemical Studies - General  *10060
     Biophysics - General Biophysical Techniques  *10504
     Biophysics - Molecular Properties and Macromolecules  *10506
     Metabolism - General Metabolism; Metabolic Pathways  *13002
     Food Technology - Poultry and Eggs  *13520
     Digestive System - Physiology and Biochemistry  *14004
     Pharmacology - General  *22002
     Toxicology - General; Methods and Experimental  *22501
     Toxicology - Foods, Food Residues, Additives and Preservatives  *22502
     Poultry Production - General; Methods  *27002
     Veterinary Science - General; Methods  *38002
     Chemotherapy - General; Methods; Metabolism  *38502
BC   Galliformes  85536
IT   Major Concepts
        Methods and Techniques
IT   Parts, Structures, & Systems of Organisms
        liver: digestive system
IT   Chemicals & Biochemicals
        carbon dioxide; sulfadimethoxine: assay, recovery, quantitative
        analysis, pharmaceutical; sulfamethazine: assay, quantitative analysis,
        recovery, pharmaceutical; sulfaquinoxaline: assay, pharmaceutical,
        recovery, quantitative analysis; sulfonamides: assay, pharmaceutical,
        quantitative analysis, recovery; tissue drug
```

**residues**: analysis
IT Methods & Equipment
supercritical liquid extraction: Isolation/Purification Techniques: CB, extraction method; H-P Chemstation **software**: Hewlett-Packard, **computer software**; H-P HPLC 1050 series system: Hewlett-Packard, equipment; HPLC [high performance liquid chromatography]: analytical method, liquid chromatography; Spe-ed SFE Model 7010 extractor: Applied Separations, equipment
ORGN Super Taxa
Galliformes: Aves, Vertebrata, Chordata, Animalia
ORGN Organism Name
chicken (Galliformes)
ORGN Organism Superterms
**Animals**; Birds; Chordates; Nonhuman Vertebrates; Vertebrates
RN 63-74-1D (SULFONAMIDES)
57-68-1 (SULFAMETHAZINE)
122-11-2 (SULFADIMETHOXINE)
59-40-5 (SULFAQUINOXALINE)
124-38-9 (CARBON DIOXIDE)

L38 ANSWER 3 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:417619 BIOSIS
DN PREV199699139975
TI Ketoprofen concentrations in plasma and milk after intravenous administration in dairy cattle.
AU Degraves, F. J.; Riddell, M. G.; Schumacher, J.
CS Dep. Large Animal Surgery Med., Coll. Veterinary Med., Auburn Univ., 133 McAdory Hall, Auburn, AL 36849-5522 USA
SO American Journal of Veterinary Research, (1996) Vol. 57, No. 7, pp. 1031-1033.
ISSN: 0002-9645.
DT Article
LA English
AB Objective-To determine plasma and milk concentration-time profiles and pharmacokinetic variables after IV administration of ketoprofen to lactating dairy cows. Design-Cows received a single IV bolus of ketoprofen (3.31 mg/kg of body weight). Blood and milk were collected at 0, 5, 10, 15, 25, 40, 60, 90, 120, 180, 240, 360, and 480 minutes. Ketoprofen concentrations in plasma and milk were determined. **Animals**-6 clinically normal lactating Holstein cows. Procedure-Plasma and milk samples were processed by solvent extraction, and ketoprofen concentrations were determined, using high-performance liquid chromatography with octadecyl silane reverse-phase guard and analytic columns. A **computer** polyexponential curve-stripping program was used to fit ketoprofen concentration-time data and to calculate pharmacokinetic variables. Results-The lower limit of detection for ketoprofen in plasma was 18 ng/ml; the lower limit of quantification was 60 ng/ml. The lower limit of detection for ketoprofen in milk was 27 ng/ml; the lower limit of quantification was 90 ng/ml. Plasma ketoprofen concentration-time curves best fit an open two-compartment pharmacokinetic model. Harmonic mean apparent volume of distribution at steady state was 0.11 (range, 0.095 to 0. 1 3) L/kg, elimination half-life was 0.49 (range, 0.40 to 0,67) hour, and total clearance was 0.1 (range, 0.14 to 0.19) L/kg/h. Ketoprofen was detected in some milk samples, 10 to 120 minutes after administration, but all concentrations were below the limit of quantification. Adverse effects were not observed in cows given ketoprofen, Conclusions-The elimination half-life for ketoprofen is short, and low concentrations of ketoprofen can be detected in normal milk, after IV treatment of cattle with ketoprofen. Milk and meat from cattle treated IV with ketoprofen should not be an important **drug** **residue** risk if appropriate withholding periods are used.
CC Biochemical Studies - General *10060
Metabolism - General Metabolism; Metabolic Pathways *13002
Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies

*15002
Reproductive System - Physiology and Biochemistry *16504
Pharmacology - Cardiovascular System *22010
Veterinary Science - General; Methods *38002
BC Bovidae *85715
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Metabolism; Pharmacology; Reproductive System (Reproduction); Veterinary Medicine (Medical Sciences)
IT Chemicals & Biochemicals
KETOPROFEN
IT Miscellaneous Descriptors
ANTIINFLAMMATORY-DRUG; KETOPROFEN; PHARMACOKINETICS
ORGN Super Taxa
Bovidae: Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
Bovidae (Bovidae)
ORGN Organism Superterms
**animals**; artiodactyls; chordates; mammals; nonhuman vertebrates; nonhuman mammals; vertebrates
RN 22071-15-4 (KETOPROFEN)

L38 ANSWER 4 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1995:419108 BIOSIS
DN PREV199598433408
TI Comparative plasma and **tissue** pharmacokinetics and **drug residue** profiles of different chemotherapeutants in fowls and rabbits.
AU Li, T.; Qiao, G. L. (1); Hu, G. Z.; Meng, F. D.; Qiu, Y. S.; Zhang, X. Y.; Guo, W. X.; Yie, H. L.; Li, S. F.; Li, S. Y.
CS (1) Cutaneous Pharmacology Toxicology Cent., Coll. Veterinary Med., Box 8401, North Carolina State Univ., Raleigh, NC 27606 USA
SO Journal of Veterinary Pharmacology and Therapeutics, (1995) Vol. 18, No. 4, pp. 260-273.
ISSN: 0140-7783.
DT Article
LA English
AB Blood and **tissue** pharmacokinetics and **drug residue** profiles of six chemotherapeutants were studied. Ceftriaxone (CEF), intravenously at 5 0 mg/kg, sulfamonomethoxine (SMM) and sulfaquinoxaline (SQ), orally at 200 mg/kg, and olaquindox (OLA), orally at 50 mg/kg, were administered to young broilers. Penicillin (PEN), intramuscularly at 200 000 U/kg, and albendazole (ALB), orally at 20 mg/kg, were given to rabbits. For each drug, 13-18 groups (n = 5-10 individuals/group) of the dosed **animals** were killed at different post-dosing times. Drug and/or metabolite concentrations in plasma, liver, kidney, heart, lung, and **muscle tissues** were analysed by HPLC procedures. Multi-exponential kinetic models were fitted to the observed **tissue** concentration-time data by applying a non-linear least-squares regression **computer** program. **Tissue** half-life, peak **tissue** concentration, and time of peak **tissue** concentration were determined. Half-life of CEF, SMM, SQ, OLA, PEN, ALB, and two metabolites of ALB (sulfoxide and sulfone) in various **tissues** ranged 0.6-1.4, 4.7-9.0, 4.5-18.9, 1.8-3.1, 0.9-3.0, 3.4-9.6, 5.0-16.1 and 7.4-12.2 h. The times required for CEF, SMM, SQ, OLA, PEN, and ALB residue concentrations to decline to 0.1 mu-g/g in various **tissues** ranged from 5.0-11.6, 70.0-110.5, 114.0-179.8, 21.3-30.3, 4.1-24.8 and 47.8-84.4 h. Drug kinetic characteristics in **tissues** differed significantly from those in plasma, and also varied from **tissue** to **tissue**. It is necessary, therefore, to evaluate **tissue** kinetics when designing dosage regimens in **tissue** infection chemotherapy with these drugs. Knowledge of **tissue** kinetics is also important in predicting and controlling **drug residues** in edible

**tissues** of food-producing **animals**.
CC Cytology and Cytochemistry - Animal *02506
Biochemical Studies - General *10060
Physiology, General and Miscellaneous - Comparative *12003
Pathology, General and Miscellaneous - Therapy *12512
Metabolism - General Metabolism; Metabolic Pathways *13002
Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies *15002
Pharmacology - General *22002
Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
Toxicology - Pharmacological Toxicology *22504
BC Aves - Unspecified 85500
Leporidae *86040
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); **Cell** Biology; Metabolism; Pathology; Pharmacology; Physiology; Toxicology
IT Chemicals & Biochemicals
CEFTRIAXONE; SULFAMONOMETHOXINE; SULFAQUINOXALINE; OLAQUINDOX; PENICILLIN; ALBENDAZOLE
IT Miscellaneous Descriptors
ALBENDAZOLE; ANTIBACTERIAL-DRUG; ANTIHELMINTHIC-DRUG; ANTIINFECTIVE-DRUG; ANTIPARASITIC-DRUG; CEFTRIAXONE; METABOLIC-DRUG; OLAQUINDOX; PENICILLIN; SULFAMONOMETHOXINE; SULFAQUINOXALINE
ORGN Super Taxa
Aves - Unspecified: Aves, Vertebrata, Chordata, Animalia; Leporidae: Lagomorpha, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
Aves (Aves - Unspecified); Leporidae (Leporidae)
ORGN Organism Superterms
**animals**; birds; chordates; lagomorphs; mammals; nonhuman mammals; nonhuman vertebrates; vertebrates
RN 73384-59-5 (CEFTRIAXONE)
1220-83-3 (SULFAMONOMETHOXINE)
59-40-5 (SULFAQUINOXALINE)
23696-28-8 (OLAQUINDOX)
1406-05-9 (PENICILLIN)
54965-21-8 (ALBENDAZOLE)

L38 ANSWER 5 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1994:37096 BIOSIS
DN PREV199497050096
TI Structure-function relationship studies in human cholinesterases reveal genomic origins for individual variations in cholinergic drug responses.
AU Loewenstein, Yael; Gnatt, Averell; Neville, Lewis F.; Zakut, Haim (1); Soreq, Hermona
CS (1) Dep. Obstet. and Gynecol., Edith Wolfson Med. Cent., Sackler Fac. Med., Tel-Aviv Univ., P.O. Box 5, Holon 58100 Israel
SO Progress in Neuro-Psychopharmacology & Biological Psychiatry, (1993) Vol. 17, No. 6, pp. 905-926.
ISSN: 0278-5846.
DT Article
LA English
AB 1. Due to their involvement in the termination of neurotransmission at cholinergic synapses and neuromuscular junctions, cholinesterases are the target proteins for numerous drugs of neuro-psychopharmacology importance. 2. In order to perform structure-function relationship studies on human cholinesterases with respect to such drugs, a set of expression vectors was engineered, all of which include cloned cDNA inserts encoding various forms of human acetyl- and butyrylcholinesterase. These vectors were designed to be transcribed in vitro into their corresponding mRNA products which, when microinjected into Xenopus oocytes, are efficiently translated to yield their catalytically active enzymes, each with its distinct substrate specificity and sensitivity to selective inhibitors. 3. A fully

automated microtiter plate assay for evaluating the inhibition of said enzymes by tested cholinergic drugs and/or poisons has been developed, in conjunction with **computerized** data analysis, which offers prediction of such inhibition data on the authentic human enzymes and their natural or mutagenized variants. 4. Thus, it was found that asp70 fwdarw gly substitution renders butyrylcholinesterase succinylcholine insensitive and resistant to oxime reactivation while ser 425 fwdarw Pro with gly70 gives rise to the "atypical" butyrylcholinesterase phenotype, abolishing dibucaine binding. 5. Furthermore, differences in cholinesterase affinities to physostigmine, ecothiophate and bambuterol were shown in these natural variants. 6. Definition of key **residues** important for **drug** interactions may initiate rational design of more specific cholinesterase inhibitors, with fewer side effects. This, in turn, offers therapeutic potential in the treatment of clinical syndromes such as Alzheimer's and Parkinson's disease, glaucoma and myasthenia gravis.

CC Genetics and Cytogenetics - Human *03508
Biochemical Studies - General 10060
Biophysics - Molecular Properties and Macromolecules 10506
Enzymes - Physiological Studies *10808
Endocrine System - Neuroendocrinology *17020
Nervous System - Physiology and Biochemistry *20504
Pharmacology - Clinical Pharmacology *22005
Pharmacology - Neuropharmacology *22024

BC Hominidae *86215

IT Major Concepts
Endocrine System (Chemical Coordination and Homeostasis); Enzymology (Biochemistry and Molecular Biophysics); Genetics; Nervous System (Neural Coordination); Pharmacology

IT Chemicals & Biochemicals
CHOLINESTERASES; ACETYLCHOLINESTERASE; BUTYRYLCHOLINESTERASE

IT Miscellaneous Descriptors
ACETYLCHOLINESTERASE; BUTYRYLCHOLINESTERASE; PHARMACOLOGY

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
Hominidae (Hominidae)

ORGN Organism Superterms
**animals**; chordates; humans; mammals; primates; vertebrates

RN 9001-08-5D (CHOLINESTERASES)
9000-81-1 (ACETYLCHOLINESTERASE)
9001-08-5 (BUTYRYLCHOLINESTERASE)

L38 ANSWER 7 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS

AN 1989:128427 BIOSIS

DN BA87:63080

TI PHARMACOKINETIC ESTIMATION FOR THERAPEUTIC DOSAGE REGIMENS PETDR A **SOFTWARE** PROGRAM DESIGNED TO DETERMINE INTRAVENOUS DRUG DOSAGE REGIMENS FOR VETERINARY APPLICATIONS.

AU RIVIERE J E; FRAZIER D L; TIPPITT W L

CS LAB. TOXICOKINETICS, COLL. VET. MED., N.C. STATE UNIV., 4700 HILLSBOROUGH ST., RALEIGH, N.C. 27606, USA.

SO J VET PHARMACOL THER, (1988) 11 (4), 390-396.
CODEN: JVPTD9. ISSN: 0140-7783.

FS BA; OLD

LA English

AB Pharmacokinetic estimation for therapeutic dosage regimens (PETDR) is a **software** program used to design individualized intravenous dosage regimens, determine concentration-time profiles, predict serum concentrations at a specific time after intravenous dosing and predict the time after the last dose to achieve a specified concentration of drug. The reference pharmacokinetic parameters may be based on an individual **animal**'s pharmacokinetic disposition of drug or on FARAD (Food **Animal** Residue Avoidance Databank) mean population kinetic

parameters. An individual **animal**'s kinetic parameters may be input for predetermined analysis or the program can calculate these values by input of raw serum concentration-time data. The program allows the user to specify certain parameters of the dosage regimen, then calculates the other parameters (given desired maximum and minimum serum concentrations, dose and interval are calculated; given desired maximum serum concentration and interval, dose is calculated, etc.). Given the kinetic parameters, the dose and dosing interval, the program calculates and plots the serum concentration-time profile of the drug for that **animal**. The time and the number of doses to reach steady state can be calculated as well as the determination of loading dose. The percentage of the time of a dosing interval at steady state that the serum concentration is above a specific minimum inhibitory concentration (MIC) allows evaluations of efficacy of an antimicrobial regimen. Similarly, the time to reach a specific concentration (e.g. residue tolerance) or the MIC of a drug can be calculated. Legal **tissue** tolerances can be accessed from FARAD to aid in predicting for what period of time illegal residues will remain in the **animal**. These calculations allow design of dosage regimens that maximize therapeutic efficacy and minimize toxicity to the patient as well as to decrease the incidence of **drug residues** in food **animals**.

CC General Biology - Information, Documentation, Retrieval and Computer Applications *00530
Biochemical Studies - General 10060
Pathology, General and Miscellaneous - Therapy *12512
Metabolism - General Metabolism; Metabolic Pathways *13002
Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies *15002
Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
Veterinary Science - General; Methods *38002

BC Animalia - Unspecified 33000

IT Miscellaneous Descriptors
**ANIMAL** THERAPEUTIC EFFICACY MAXIMIZATION **SOFTWARE** PROGRAM

L38 ANSWER 8 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS

AN 1987:13597 BIOSIS

DN BR32:3730

TI FOOD **ANIMAL** RESIDUE AVOIDANCE DATA-BANK AN AUTOMATED PHARMACOLOGIC DATA-BANK FOR **DRUG** AND CHEMICAL **RESIDUE** AVOIDANCE.

AU RIVIERE J E; CRAIGMILL A L; SUNDLOF S F

CS LAB. TOXICOKINETICS, SCH. VET. MED., NORTH CAROLINA STATE UNIV., RALEIGH, N.C. 27606.

SO J. Food Prot., (1986) 49 (10), 826-830.
CODEN: JFPRDR. ISSN: 0362-028X.

FS BR; OLD

LA English

CC General Biology - Information, Documentation, Retrieval and Computer Applications *00530
Biochemical Studies - General 10060
Metabolism - General Metabolism; Metabolic Pathways 13002
Food Technology - General; Methods *13502
Food Technology - Meats and Meat By - Products 13516
Food Technology - Dairy Products 13518
Food Technology - Evaluations of Physical and Chemical Properties 13530
Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
Toxicology - Foods, Food Residues, Additives and Preservatives *22502
Toxicology - Pharmacological Toxicology *22504
Toxicology - Veterinary Toxicology *22508
Animal Production - General; Methods *26502
Veterinary Science - General; Methods 38002

IT Miscellaneous Descriptors
FOOD RESIDUE MILK PHARMACOKINETICS **COMPUTERS**

L38 ANSWER 9 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1986:64927 BIOSIS
DN BR30:64927
TI **COMPUTERIZED** FOOD-**ANIMAL** RESIDUE-AVOIDANCE DATA-BANK FOR VETERINARIANS.
AU SUNDLOF S F; RIVIERE J E; CRAIGMILL A L; BUCK W B
CS DEP. PHYSIOL. SCI., COLL. VET. MED., UNIV. FLA., GAINESVILLE, FLA. 32610.
SO J. Am. Vet. Med. Assoc., (1986) 188 (1), 73-76.
CODEN: JAVMA4. ISSN: 0003-1488.
FS BR; OLD
LA English
CC General Biology - Institutions, Administration and Legislation 00508
General Biology - Information, Documentation, Retrieval and Computer Applications *00530
Mathematical Biology and Statistical Methods *04500
Biochemical Studies - General 10060
Food Technology - Meats and Meat By - Products *13516
Food Technology - Dairy Products *13518
Food Technology - Poultry and Eggs *13520
Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
Toxicology - Foods, Food Residues, Additives and Preservatives *22502
Toxicology - Pharmacological Toxicology *22504
IT Miscellaneous Descriptors
LIVESTOCK MEAT MILK EGG **DRUG RESIDUE** USA DEPARTMENT OF AGRICULTURE

Astorino, Michael/0902

=> D QUE

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L5        121229 SEA FILE=MEDLINE ABB=ON  PLU=ON  RESIDUE#
L18         1080 SEA FILE=MEDLINE ABB=ON  PLU=ON  "DRUG RESIDUES"/CT
L42         6204 SEA FILE=MEDLINE ABB=ON  PLU=ON  L1.700.568.110.85+NT/CT
L43       997009 SEA FILE=MEDLINE ABB=ON  PLU=ON  ANALYSIS/CT
L44       121229 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18 OR L5
L45           40 SEA FILE=MEDLINE ABB=ON  PLU=ON  L42 AND L44
L46            9 SEA FILE=MEDLINE ABB=ON  PLU=ON  L45 AND L43
```

=> D 4 7 8 9 ALL

L46 ANSWER 4 OF 9 MEDLINE
AN 91210394 MEDLINE
DN 91210394
TI Post-column continuous-flow analysis combined with reversed-phase liquid chromatography and computer-aided detection for the characterisation of peptides.
AU Fell A F; Castledine J B; Sellberg B; Modin R; Weinberger R
CS Department of Pharmaceutical Chemistry, School of Pharmacy, University of Bradford, U.K..
SO JOURNAL OF CHROMATOGRAPHY, (1990 Dec 28) 535 (1-2) 33-9.
Journal code: HQF. ISSN: 0021-9673.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199108
AB Peptide mapping is a key technique for structural identification of new proteins or the products of recombinant gene technology. The recognition of oligopeptides, separated by reversed-phase liquid chromatography, is limited by the conventional reliance on the correlation of retention times with standards, supported by dual-wavelength chromatograms. It has been reported that the recognition of phenolic compounds can be achieved by a novel technique, based on computer-aided photodiode-array detection of the pH-shifted solutes after post-column continuous-flow analysis. This work describes how the generation of the pH-shifted difference spectra for dipeptides, containing a tyrosyl **residue**, may be used to enhance peak recognition, when used in conjunction with absorbance ratios.
CT Check Tags: Support, Non-U.S. Gov't
Absorptiometry, Photon
**Amino Acids: AN, analysis**
***Automatic Data Processing: MT, methods**
*Chromatography, Liquid: MT, methods
Hydrogen-Ion Concentration
*Peptides: CH, chemistry
CN 0 (Amino Acids); 0 (Peptides)

L46 ANSWER 7 OF 9 MEDLINE
AN 86181787 MEDLINE
DN 86181787
TI [Unified system of public health control over the residual amount of pesticides in food products using automated data processing].
Unifitsirovannaia sistema sanitarno-gigienicheskogo kontrolia za

ostatochnymi kolichestvami pestitsidov v produktakh pitaniia s avtomatizirovannoi obrabotkoi dannykh.
AU Selivanova L V
SO VOPROSY PITANIIA, (1986 Jan-Feb) (1) 74-8.
Journal code: XK4. ISSN: 0042-8833.
CY USSR
DT Journal; Article; (JOURNAL ARTICLE)
LA Russian
FS Priority Journals
EM 198607
CT Check Tags: Comparative Study
***Automatic Data Processing**
*Food Analysis
***Pesticide Residues: AN, analysis**
*Public Health
USSR
CN 0 (Pesticide **Residues**)

L46 ANSWER 8 OF 9 MEDLINE
AN 77105401 MEDLINE
DN 77105401
TI The effect of storage at 4 degrees C on antibiotic **residues** in kidney and meat tissues of dairy cows.
AU Nouws J F; Ziv G
SO TIJDSCHRIFT VOOR DIERGENEESKUNDE, (1976 Oct 15) 101 (20) 1145-53.
Journal code: VRY. ISSN: 0040-7453.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197705
AB A method is described for the quantitative assay of antibiotic **residues** in the body of slaughtered farm animals by means of 3 types of agar media and 3 test organisms. With the help of programmed calculation procedures, data from large-scale tests for antibiotic **residues** could be analyzed accurately and rapidly. The concentrations of penicillin G, ampicillin, amoxycillin, cloxacillin, cephapirin, cephacetrile, neomycin, kanamycin, and oxytetracycline in the kidney, and also of tylosin in meat from the diaphragm muscle of cattle treated parenterally with these antibiotics were measured periodically in samples kept at 4 degrees C for up to 7 days after slaughter. The concentrations of penicillin G, ampicillin, amoxycillin and the cephalosporins in the kidney decreased rapidly upon storage whereas the levels of the other antibiotics remained essentially unchanged. Antibiotic stability in the meat was considerably greater than in the kidney upon storage for 4 days, and neomycin meat tissue levels were not reduced during storage for up to 144 hours. Results are discussed in relation to the conduct of the official qualitative Sarcina lutea Kidney Test and the most desirable procedure for preparing meat samples for assay.
CT Check Tags: Animal; Female
***Antibiotics: AN, analysis**
**Automatic Data Processing**
Biological Assay
Cattle
Cold
*Food Preservation
***Kidney: AN, analysis**
Mathematics
***Meat: AN, analysis**

L46 ANSWER 9 OF 9 MEDLINE
AN 75211654 MEDLINE
DN 75211654
TI Systems for automated multiple pesticide **residue** analysis.

AU McLeod H A
SO JOURNAL OF CHROMATOGRAPHIC SCIENCE, (1975 Jul) 13 (7) 302-7.
Journal code: HQM. ISSN: 0021-9665.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197512
AB This article reviews the development and current status of automated multiple pesticide **residue** analysis. Various configurations of equipment that perform specific steps in a method of analysis are described. These include the use of Technicon modules, automatic injectors for gas chromatography, specially designed units and data processing systems.
CT *Autoanalysis: MT, methods
**Automatic Data Processing**
Chromatography
Computers
***Pesticide Residues: AN, analysis**
**Pesticides: AN, analysis**

Astorino, Michael/0902

L23 ANSWER 1 OF 1 MEDLINE
AN 97043339 MEDLINE
DN 97043339
TI Concentration-time profiles of oxytetracycline in blood, kidney and liver of tench (Tinca tinca L) after intramuscular administration.
AU Reja A; Moreno L; Serrano J M; Santiago D; Soler F
CS Universidad de Cordoba, Dpto de Farmacologia Y Toxicologia, Spain.
SO VETERINARY AND HUMAN TOXICOLOGY, (1996 Oct) 38 (5) 344-7.
Journal code: XBV. ISSN: 0145-6296.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199703
AB Oxytetracycline (OTC) is a widely-used antibiotic in several animal species. The Food and Drug Administration allows OTC to be used in fish intended for human food, but there is limited kinetics data available. We studied OTC concentrations in plasma, kidney and liver in tenches (Tinca tinca L) after im administration using HPLC. Concentrations were fit to a monocompartment open model by extended least squares regression analysis using the MULTI (ELS) **computer** program. Peaks of OTC concentrations (Cmax) occurred at 4 h for blood and kidney and 72 h for liver and were 134.1 micrograms/mL, 129.8 micrograms/g and 333.4 micrograms/g, respectively. There was a high correlation (r = 0.9448) between blood and kidney concentrations and less between blood and liver. Concentrations were statistically different for each system. The blood OTC concentrations were higher than renal concentrations 92% of the time and were higher than hepatic concentrations 29% of the time. The plasma OTC half-life (21.2 h) was longer than in homeothermic species. The tench liver maintains considerable OTC **residues** and may affect food products derived from that organ.
CT Check Tags: Animal
Antibiotics, Tetracycline: AD, administration & dosage
Antibiotics, Tetracycline: BL, blood
Antibiotics, Tetracycline: ME, metabolism
*Antibiotics, Tetracycline: PK, pharmacokinetics
Chromatography, High Pressure Liquid
**Drug Residues: AN, analysis**
Fishes
**Half-Life**
Injections, Intramuscular
*Kidney: ME, metabolism
*Liver: ME, metabolism
Oxytetracycline: AD, administration & dosage
Oxytetracycline: BL, blood
Oxytetracycline: ME, metabolism
*Oxytetracycline: PK, pharmacokinetics
Regression Analysis
**Software**
Tissue Distribution
RN 79-57-2 (Oxytetracycline)
CN 0 (Antibiotics, Tetracycline)

=> d que

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L1   (     121229)SEA FILE=MEDLINE ABB=ON  PLU=ON  RESIDUE#
L2   (       1080)SEA FILE=MEDLINE ABB=ON  PLU=ON  "DRUG RESIDUES"/CT
L4   (     997009)SEA FILE=MEDLINE ABB=ON  PLU=ON  ANALYSIS/CT
L5   (     121229)SEA FILE=MEDLINE ABB=ON  PLU=ON  L2 OR L1
L9          23784 SEA FILE=MEDLINE ABB=ON  PLU=ON  HALF-LIFE/CT
L14        177978 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOFTWARE# OR COMPUTER? OR
                  ARTIFICIAL INTELLIGENCE
L20           378 SEA FILE=MEDLINE ABB=ON  PLU=ON  L9 AND L5
L21           130 SEA FILE=MEDLINE ABB=ON  PLU=ON  L4 AND L20
L23             1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L14 AND L21
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         303018 DRUG
         181933 DRUGS
         397224 DRUG
                   (DRUG OR DRUGS)
         339255 RESIDUE#
L39         746 DRUG(2A)RESIDUE#

=> s (animal# or tissue# or cell# or muscle# or organ#) and l39

         863066 ANIMAL#
         481828 TISSUE#
        1535017 CELL#
         195463 MUSCLE#
         131276 ORGAN#
         520784 ORG
           9646 ORGS
         524003 ORG
                   (ORG OR ORGS)
         650621 ORGAN#
                   (ORGAN# OR ORG)
L40         433 (ANIMAL# OR TISSUE# OR CELL# OR MUSCLE# OR ORGAN#) AND L39

=> s l14 and l40

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           1659 INTELLIGENCE
              4 INTELLIGENCES
           1661 INTELLIGENCE
                   (INTELLIGENCE OR INTELLIGENCES)
            998 ARTIFICIAL INTELLIGENCE
                   (ARTIFICIAL(W)INTELLIGENCE)
L41           2 L14 AND L40

=> d scan


L41   2 ANSWERS   CAPLUS  COPYRIGHT 1999 ACS
CC    1-1 (Pharmacology)
TI    Purification and analysis of drug residues in urine
      samples by on-line immunoaffinity chromatography/high-performance liquid
      chromatography/continuous-flow fast-atom-bombardment mass spectrometry
ST    diethylstilbestrol purifn analysis urine; chromatog mass spectrometry
      diethylstilbestrol urine; immunoaffinity chromatog mass spectrometry
      diethylstilbestrol; HPLC mass spectrometry diethylstilbestrol urine
IT    Urine analysis
         (diethylstilbesterol detn. in, of animals by online
         immunoaffinity chromatog./HPLC/continuos-flow fast-atom-bombardment
```

mass spectrometry)
IT **Computer** application
(in diethylstilbestrol anal. in urine of **animals**)
IT 56-53-1P
RL: PREP (Preparation)
(purifn. and anal. of, in urine of **animals**)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L41 2 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 1-2 (Pharmacology)
Section cross-reference(s): 17
TI Comparative plasma and **tissue** pharmacokinetics and **drug** **residue** profiles of different chemotherapeutics in fowls and rabbits
ST drug pharmacokinetics blood **tissue** chicken rabbit
IT Blood plasma
Chicken
Heart
Kidney
Liver
Lung
**Muscle**
Rabbit
(drug pharmacokinetics in blood plasma and **tissue** and **drug residues** in fowls and rabbits)
IT 59-40-5, Sulfaquinoxaline 61-33-6, biological studies 1220-83-3, Sulfamonomethoxine 23696-28-8, Olaquindox 54965-21-8, Albendazole 73384-59-5, Ceftriaxone
RL: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(drug pharmacokinetics in blood plasma and **tissue** and **drug residues** in fowls and rabbits)
IT 54029-12-8, Albendazole sulfoxide 75184-71-3, Albendazole sulfone
RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(drug pharmacokinetics in blood plasma and **tissue** and **drug residues** in fowls and rabbits)

ALL ANSWERS HAVE BEEN SCANNED

L46 3 (EDIBL? OR EAT? OR FOOD# OR MEAT# OR LIVESTOCK OR POULTRY OR EGG#) AND L45

=> d scan

L46 3 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 8-1 (Radiation Biochemistry)
Section cross-reference(s): 17
TI Optimization models for radiation protection in the case of **animal** feed-milk **food** chain
ST radiation contamination milk **food** chain model
IT **Computer** program
Dosimetry
Environmental analysis
Feed
**Food** chain
Milk analysis
Nuclear reactor accident
Optimization
Physicochemical simulation
(optimization models for radiation protection in case of **animal** feed-milk **food** chain)
IT Radionuclides
RL: ANT (Analyte); ANST (Analytical study)
(optimization models for radiation protection in case of **animal** feed-milk **food** chain)
IT 10043-66-0, Iodine-131, analysis 10045-97-3, Cesium-137, analysis
RL: ANT (Analyte); ANST (Analytical study)
(optimization models for radiation protection in case of **animal** feed-milk **food** chain)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L46 3 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 1-2 (Pharmacology)
Section cross-reference(s): 17
TI Comparative plasma and **tissue** pharmacokinetics and drug **residue** profiles of different chemotherapeutics in fowls and rabbits
ST drug pharmacokinetics blood **tissue** chicken rabbit
IT Blood plasma
Chicken
Heart
Kidney
Liver
Lung
**Muscle**
Rabbit
(drug pharmacokinetics in blood plasma and **tissue** and drug **residues** in fowls and rabbits)
IT 59-40-5, Sulfaquinoxaline 61-33-6, biological studies 1220-83-3, Sulfamonomethoxine 23696-28-8, Olaquindox 54965-21-8, Albendazole 73384-59-5, Ceftriaxone
RL: BOC (Biological occurrence); BPR (Biological process); BIOL

(Biological study); OCCU (Occurrence); PROC (Process)
(drug pharmacokinetics in blood plasma and **tissue** and drug **residues** in fowls and rabbits)

IT 54029-12-8, Albendazole sulfoxide 75184-71-3, Albendazole sulfone
RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(drug pharmacokinetics in blood plasma and **tissue** and drug **residues** in fowls and rabbits)

L46 3 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 1-2 (Pharmacology)
TI Concentration-time profiles of oxytetracycline in blood, kidney and liver of tench (Tinca tinca L.) after intramuscular administration
ST tench oxytetracycline metab blood kidney liver; Tinca oxytetracycline metab blood kidney liver
IT Blood plasma
Kidney
Liver
Tench
(oxytetracycline in blood, kidney and liver of tench after i.m. administration)
IT 79-57-2, Oxytetracycline
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(oxytetracycline in blood, kidney and liver of tench after i.m. administration)

Astorino, Michael/0902

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=> d que

L14       177978 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOFTWARE# OR COMPUTER? OR
                 ARTIFICIAL INTELLIGENCE
L42        58294 SEA FILE=CAPLUS ABB=ON  PLU=ON  (HALF(1A)LI?) OR (TOLERANCE#(1A
                 )CONCENTRAT?)
L43        19814 SEA FILE=CAPLUS ABB=ON  PLU=ON  (ANIMAL# OR TISSUE# OR CELL#
                 OR MUSCLE# OR ORGAN#) AND L42
L44          183 SEA FILE=CAPLUS ABB=ON  PLU=ON  L43 AND L14
L45           61 SEA FILE=CAPLUS ABB=ON  PLU=ON  (RESIDUE# OR MRL OR TOLERANC?
                 OR LEVEL#) AND L44
L48           24 SEA FILE=CAPLUS ABB=ON  PLU=ON  (ANALYS? OR EXTRACT?) AND L45
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=> D L48 ALL 3 7 15 16 19

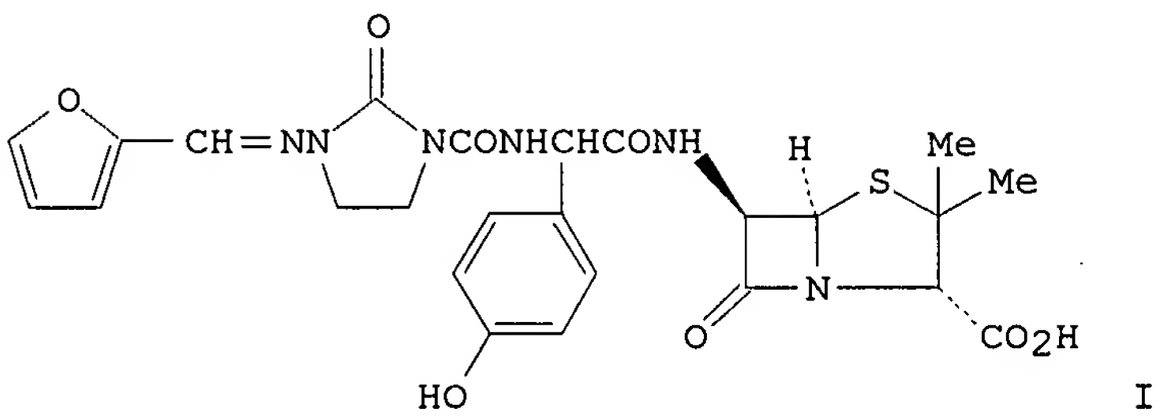
L48 ANSWER 3 OF 24 CAPLUS COPYRIGHT 1999 ACS
AN 1998:411852 CAPLUS
DN 129:174998
TI Fate and behavior of triasulfuron, metsulfuron-methyl, and chlorsulfuron in the Australian soil environment: a review
AU Sarmah, Ajit K.; Kookana, Rai S.; Alston, A. M.
CS Cooperative Research Centre for Soil and Land Management, Glen Osmond, SA 5064, Australia
SO Aust. J. Agric. Res. (1998), 49(5), 775-790
CODEN: AJAEA9; ISSN: 0004-9409
PB CSIRO Publishing
DT Journal; General Review
LA English
CC 19-0 (Fertilizers, Soils, and Plant Nutrition)
Section cross-reference(s): 5
AB A review with many refs. on the fate and behavior of the title herbicides in soils, with particular ref. to alk. soils of Australia. Low application rates of sulfonylurea herbicides continue to present an **anal**. challenge, although in recent years a no. of new methods capable of detecting them at very low concns. have been developed. A range of **anal**. methods is available, including high HPLC, gas chromatog., immunoassay, and bioassay. However, **anal**. sensitivity required to detect trace **levels** of these herbicides continues to pose problems in routine detection of herbicide **residues** in soils. The review reveals that there are no reports of studies of the behavior of sulfonylureas in soils with pH >8.2. This is of particular significance to Australian conditions, because a no. of Australian soils are even more alk., and the pH (water) in subsoils can be as high as 10.2. Sorption of sulfonylureas is pH-dependent and has a strong neg. correlation with pH. At pH >8.0, sorption is very low. In acid soils, however, sorption of chlorsulfuron, metsulfuron-Me, and triasulfuron is strongly influenced by the soil temp., clay content, and, particularly, **org**. matter content. The principal modes of degrdn. of the herbicides are acid hydrolysis and microbial degrdn., with the latter being the only major pathway in alk. soils. Hydrolysis of the sulfonylureas is more rapid under acidic conditions (pH 4-7), and hydrolysis is likely to be very slow in alk. soils. Data from other countries suggest that the **half-life** of chlorsulfuron increases exponentially with pH, and that it is also influenced by variations in the temp. and water content of the soil. Being acidic, the herbicide mols. become anionic at high pH and can move to a considerable depth in the soil profile by leaching. Movement of the sulfonylureas in soil is largely influenced by **org**. matter content and soil pH and sulfonylureas have substantial leaching potential in the sandy alk. soils of Australia. This is likely to result in increased persistence in alk. subsoils lacking in **org**. matter and biol. activity. **Computer** models to predict the persistence and movement of the sulfonylureas are available; however, addnl. input parameters are required to predict accurately the behavior of specific herbicides in alk. soils under Australian conditions. Since new herbicides with chem. similar to existing sulfonylureas are increasingly likely to be available for use, there is a need to develop comprehensive understanding of their fate, behavior, and impact on Australian cropping and ecol. systems.

ST sulfonylurea herbicide soil pollution review
IT Herbicides
Soil pollution
(fate and behavior of sulfonylurea herbicides in soil)
IT 64902-72-3, Chlorsulfuron 74223-64-6, Metsulfuron-methyl 82097-50-5, Triasulfuron
RL: POL (Pollutant); OCCU (Occurrence)
(fate and behavior of sulfonylurea herbicides in soil)

L48 ANSWER 7 OF 24 CAPLUS COPYRIGHT 1999 ACS
AN 1994:693548 CAPLUS
DN 121:293548
TI Kinetics of prostacyclin synthesis in PGHS-1-overexpressed endothelial **cells**
AU Sanduja, S. K.; Tsai, A.-L.; Matijevic-Aleksic, N.; Wu, K. K.
CS Dep. Internal Med., Univ. Texas, Houston, TX, 77030, USA
SO Am. J. Physiol. (1994), 267(5, Pt. 1), C1459-C1466
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English
CC 2-9 (Mammalian Hormones)
Section cross-reference(s): 7
AB The availability of a human endothelial **cell** overexpressed with prostaglandin H synthase-1 (PGHS-1) by retrovirus-mediated gene transfer made it possible to quantify the kinetics of prostacyclin [prostaglandin (PG) I2] synthesis and PGHS-1 turnover. Prostacyclin synthesis in response to arachidonate (AA) and ionophore A-23187 fit a single exponential kinetics. The rat consts. for AA- and ionophore-treated **cells** were 0.064 min-1 [**half-life** (t1/2) of 11 min] and 0.032 min-1 (t1/2 = 22 min), resp. The rate const. of PGI2 synthesis from PGH2 was 0.13 min-1. Using kinetic **anal**. coupled with **computer** modeling, the PGHS-1 **half-life** was detd. to be 10.8 min. PGI2 prodn. under successive treatments with AA or ionophore was reduced by only .apprx.30% after each treatment. The decline of PGI2 synthesis corresponded to the redn. of PGHS-1 mass. The **half-life** of PGI2 synthesis from this **anal**. was at least an order of magnitude higher than that estd. from the single-dose expt. These findings indicate that .apprx.30% of PGHS-1 was degraded during each catalysis-induced auto-inactivation and that the extent and duration of PGI2 synthesis are governed by the **level** of PGHS-1 mass.
ST prostacyclin prostaglandin H synthase endothelium
IT Kinetics, enzymic
(kinetics of prostacyclin synthesis in endothelial **cells** overexpressing prostaglandin synthase-1)
IT 59763-19-8, Prostaglandin H synthase
RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(1; kinetics of prostacyclin synthesis in endothelial **cells** overexpressing prostaglandin synthase-1)
IT 363-24-6, PGE2 35121-78-9, Prostacyclin 42935-17-1, PGH2 58962-34-8
RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(kinetics of prostacyclin synthesis in endothelial **cells** overexpressing prostaglandin synthase-1)

L48 ANSWER 15 OF 24 CAPLUS COPYRIGHT 1999 ACS
AN 1983:481999 CAPLUS
DN 99:81999
TI The pharmacokinetics of furazlocillin in healthy humans
AU Hinderling, Peter H.; Gundert-Remy, Ursula; Foerster, Dietrich; Gau, Wolfgang
CS Biozent., Univ. Basel, Basel, Switz.
SO J. Pharmacokinet. Biopharm. (1983), 11(1), 5-30

CODEN: JPBPBJ; ISSN: 0090-466X
DT Journal
LA English
CC 1-2 (Pharmacology)
GI



I

AB The pharmacokinetics of furazlocillin (I) [66327-51-3] and its penicilloic acid deriv. [86683-42-3] were investigated in healthy volunteers after i.v. administration of 2 and 4 g dosages. Plasma protein binding (66%) and apparent red **cell**-plasma partition coeff. (0.055) of I were concn. independent. The pharmacokinetics of I were 1st order only at the lower dose **level**. The apparent **half lives** of 3 distinguishable phases were 4, 18, and 64 min. The total and renal clearances of I were, resp., 303 and 79 mL/min. The latter value implied tubular secretion of the drug. Graphical and digital **computer analyses** of the data were performed with a linear 3-compartment body model. Small but consistent deviations from linear kinetics caused by the nonrenal elimination route were obsd. after administration of the higher dose (4 g). In contrast, renal elimination showed no such dose dependency and was 1st order. The disposition kinetics of I were body-position independent. The penicilloic acid deriv. of I was found in the plasma and urine in all the subjects tested. The percentage of the dose excreted renally as the deriv. amounted, resp., to 5.2 and 7.0% after the lower and higher dosage of I, with significant inter- and intrasubject variability. The renal clearance of the deriv. was 41 mL/min.

ST furazlocillin pharmacokinetics
IT Process simulation, biological
(of furazlocillin pharmacokinetics)
IT 86683-42-3
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(pharmacokinetics of, as furazlocillin metabolite in humans)
IT 66327-51-3
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(pharmacokinetics of, in humans)

L48 ANSWER 16 OF 24 CAPLUS COPYRIGHT 1999 ACS
AN 1980:492633 CAPLUS
DN 93:92633
TI Regulation of ribosomal ribonucleic acid **levels** in growing, 3H-arrested, and crisis-phase WI-38 human diploid fibroblasts
AU Wolf, Stanley; Sameshima, Masazumi; Liebhaber, Steven A.; Schlessinger, David
CS Sch. Med., Washington Univ., St. Louis, MO, 63110, USA
SO Biochemistry (1980), 19(15), 3484-90
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English
CC 13-13 (Mammalian Biochemistry)

AB When the growth of WI-38 **cells** slowed in confluent cultures, the **levels** of RNA and protein per **cell** remained const. In contrast, when **cell** division was completely arrested by incubation of **cells** in serum factor-depleted medium, by 3H irradn., or by repeated passage of **cells** into the nondividing senescent phase, the RNA and protein contents of each **cell** increased .ltoreq.3.5-fold and then stabilized. How the balance of synthesis and turnover could produce the higher **levels** of RNA was analyzed. The flow of Me label from methionine-methyl-3H into nascent 45 S pre-rRNA and rRNA and the turnover of methionine-methyl-3H- or uridine-5-3H-labeled cytoplasmic rRNA were measured. **Computer** -assisted modeling of data from gel electrophoretic sepns. of RNA (Wolf, S. F. et al., 1977) was used to quantitate rates of synthesis, processing, and nuclear turnover. In addn. to the RNA species found in growing **cells**, phenol-detergent **exts**. from nongrowing **cells** contained a previously undetected, rapidly methyl-labeled fraction that was formed even in the presence of actinomycin D and was excluded from the **analyses**. The rates of initial labeling of 45 S pre-rRNA varied at most by 50% in growing and nongrowing **cells** . The rates of formation of 18 S and 28 S rRNA were very similar, and the **half-life** of cytoplasmic RNA was 3-4 days in all growth states. In senescent **cells**, quantitation showed that .gtoreq.30% of the 18 S and 28 S rRNA was turned over in nuclear precursors, and no 32 S pre-rRNA was obsd. In that case, wastage affected the accumulation of RNA and the processing pathway may be altered. In growing and 3H-arrested **cells**, however, no nuclear turnover of 18 S or 28 S rRNA sequences was detected, and all processing intermediates and **levels** were the same. Thus, the **level** of rRNA in diploid fibroblasts increases when division stops primarily because diln. of RNA into daughter **cells** ceases.

ST ribosomal RNA fibroblast **cell** division

IT Proteins
Ribonucleic acids, ribosomal
Ribonucleic acids
RL: BIOL (Biological study)
(of fibroblasts, **cell** division effect on)

IT **Cell** division
(ribosomal RNA of fibroblasts in)

IT Fibroblast
(ribosomal RNA of, **cell** division effect on)

L48 ANSWER 19 OF 24 CAPLUS COPYRIGHT 1999 ACS
AN 1978:19309 CAPLUS
DN 88:19309
TI Kinetic **analysis** of 25-hydroxyvitamin D3 metabolism in strontium-induced rickets in the chick
AU Omdahl, J. L.; Jelinek, G.; Eaton, R. P.
CS Dep. Biochem., Univ. New Mexico Sch. Med., Albuquerque, N. Mex., USA
SO J. Clin. Invest. (1977), 60(5), 1202-10
CODEN: JCINAO
DT Journal
LA English
CC 12-5 (Nonmammalian Biochemistry)

AB Kinetic data **anal**. was used to derive a 6-compartment **computer** model which describes the in vivo 25-hydroxyvitamin D3 (I) metab. in control and Sr rachitic chicks. Plasma concns. of I (13 pmol/mL) and 24,25-dihydroxyvitamin D3 (0.9 pmol/mL) were 18 and 125% greater than controls, resp., whereas the corresponding **level** for 1.alpha.,25-dihydroxyvitamin D3 (0.3 pmol/mL) was only 30% of control. Plasma disappearance of I was fitted using a 2-compartment model in which the metabolite extrapolated **half-life** was nearly twice as large for Sr rachitic chicks (71 compared to 41 h). Intestinal sequestration of 1.alpha.,25-dihydroxyvitamin D3 was assumed to be irreversible and was fitted by a single exponential term in which

metabolite uptake rate and **tissue** concn. in Sr rickets was suppressed to 20 and 10% of control, resp. In contrast, uptake of I by the intestine occurred by a reversible process in which metabolite concn. was 45% greater in the Sr rachitic compared to the control group. The developed compartment model accepts time-dependent control or perturbed metabolite data for the plasma and(or) intestinal pools and provides quant. values for metabolite pool size, flux rate, and turnover time.

ST hydroxyvitamin D3 chicken rickets model; vitamin D3 chicken rickets model

IT Rickets
(hydroxyvitamin D3 metab. by chickens in, simulation of)

IT Chicken
(hydroxyvitamin D3 metab. by, in rickets, simulation of)

IT Intestine, metabolism
(hydroxyvitamin D3 transport by, of chickens in rickets)

IT Simulation model
(of hydroxyvitamin D3 metab., by chickens in rickets)

IT 19356-17-3 32222-06-3 40013-87-4
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metab. of, by chickens in rickets, simulation of)

Astorino, Michael/0902

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=> D QUE

L14       177978 SEA FILE=MEDLINE ABB=ON  PLU=ON  SOFTWARE# OR COMPUTER? OR
                 ARTIFICIAL INTELLIGENCE
L31       488192 SEA FILE=BIOSIS ABB=ON  PLU=ON  ?PROCESS?
L42        58294 SEA FILE=CAPLUS ABB=ON  PLU=ON  (HALF(1A)LI?) OR (TOLERANCE#(1A
                 )CONCENTRAT?)
L50       412299 SEA FILE=WPIDS ABB=ON  PLU=ON  (ANIMAL# OR TISSUE# OR CELL# OR
                 MUSCLE# OR ORGAN#)
L55       527980 SEA FILE=WPIDS ABB=ON  PLU=ON  L42 OR (RESIDUE# OR MRL OR
                 TOLERANC? OR LEVEL#)
L56        36822 SEA FILE=WPIDS ABB=ON  PLU=ON  L50 AND L55
L57      1366067 SEA FILE=WPIDS ABB=ON  PLU=ON  L14 OR L31
L58         7711 SEA FILE=WPIDS ABB=ON  PLU=ON  L56 AND L57
L59          620 SEA FILE=WPIDS ABB=ON  PLU=ON  (EDIBL? OR EAT? OR FOOD# OR
                 MEAT# OR LIVESTOCK OR POULTRY OR EGG#) AND L58
L66           17 SEA FILE=WPIDS ABB=ON  PLU=ON  (SOFTWARE? OR COMPUTER?) AND
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Timothy Saunders STIC-Library  308-4133

=> D ALL 1-4

L68 ANSWER 1 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN **98-077295** [07] WPIDS
DNN N98-061731 DNC C98-025948
TI Analysis of complex biological samples to e.g. diagnose disease, identify microorganisms, detect environmental toxins etc. - with array of sensor elements on solid support, then measuring increases in mass on the sensor surface and processing results by pattern recognition.
DC B04 C07 D13 D15 D16 J04 S03
IN DANIELSSON, B; MECKLENBURG, M; WINQVIST, F; WINQUIST, F
PA (BTBI-N) BT BIOMEDICAL TECHNOLOGY AB; (DANI-I) DANILSSON B; (MECK-I) MECKLENBURG M; (WINQ-I) WINQVIST F; (INTE-N) INTERACTIVA BIOTECHNOLOGIE GMBH
CYC 21
PI WO 9749989 A2 971231 (9807)* EN 29 pp G01N033-00
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP US
SE 9602545 A 971226 (9814) G01N033-543
AU 9734363 A 980114 (9822) G01N033-00
ADT WO 9749989 A2 WO 97-EP3317 970624; SE 9602545 A SE 96-2545 960625; AU 9734363 A AU 97-34363 970624
FDT AU 9734363 A Based on WO 9749989
PRAI SE 96-2545 960625
IC ICM G01N033-00; G01N033-543
ICS G06K009-00
AB WO 9749989 A UPAB: 980216
Complex biological samples are differentiated using an array of discrete sensor elements immobilised on a solid support, with constituents that bind to the array being determined directly from measuring the increase in mass on the sensor surface. Data are analysed using a neural network or statistics-based pattern recognition techniques.

A liquid sample is applied to the array, any unbound material removed, bound components measured from increase in mass and the data compared with a reference by pattern recognition software. The sensor elements contain antibodies, lectins, nucleic acid and/or carbohydrates, their genetically modified derivatives and gradients; also useful are non-biological materials such as cyclodextrins, roxane and/or template or imprinted polymers. The increase in surface mass is measured by quartz crystal microbalances, opto-acoustics, reflectometry, ellipsometry, standing acoustic waves or surface plasmon resonance, particularly in imaging mode using a CCD camera. For diagnosis suitable samples are blood, urine, milk, exhaled air, skin, serum, etc.

USE - The method is used: (i) to diagnose or monitor diseases (genetic, autoimmune, infectious, heart or lung diseases, cancer and drug abuse); (ii) to determine the general state of health (e.g. mild, common ailments with vague symptoms and exposure to low levels of toxins or radiation, such as high blood pressure, pregnancy, common colds, injuries, inflammatory reactions, mild immune suppressions, doping, altitude sickness, space sickness, chronic fatigue syndrome and effects of low level toxic chemical or radiation exposure, menstrual cycles and subclinical infections); (iii) to identify organisms (animal, fungus, virus, bacterium, plant or protozoa); (iv) to identify contamination by toxins in environmental samples (air, soil, water, rock, ice, plants, lichen, animals or foods); (v) after isolation of bound components, to

study diseases and develop drugs.

ADVANTAGE - The bound components do not have to be identified, so time and costs of assays are reduced. A large array identifies overall characteristics in complex samples, providing far more information than conventional quantification of a single material, and reducing the number of assays needed to provide a diagnosis. The selected elements have low specificity, so can detect subtle changes, giving an early indication of disease. Lectin-based sensors are more informative than immunoassays since carbohydrates are the greatest single source of diversity in biological systems and lectin structures are more variable than antibody structures.

Dwg.5/5

FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-F01; C04-F01; B11-C08; C11-C08; B12-K04A; C12-K04A; D03-K03; D03-K04; D04-A01H; D05-H04; D05-H05; D05-H06; D05-H09; D05-H10; J04-B01
EPI: S03-E14

L68 ANSWER 2 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN **92-285321** [35] WPIDS
DNN N92-218346 DNC C92-126946
TI Determn. of fat content of biological tissues - using computer to compare pressure and temp. measurement of meat mincer with known characteristics of meat samples.
DC B04 D12 J04 P41
IN EFFLER, R; KNIPPEL, G; SIELAFF, H; THIEMIG, F; ZIEGS, E
PA (SCHL-N) SCHLACHT & VERARBEITUNGSKOMBINAT; (UYBE) UNIV BERLIN HUMBOLDT
CYC 1
PI DD 299204 A5 920402 (9235)* 3 pp G01N033-12
ADT DD 299204 A5 DD 90-340535 900510
PRAI DD 90-340535 900510
IC ICM G01N033-12
ICS B02C018-30; B02C025-00
AB DD 299204 A UPAB: 931113

In a new device for computer-aided determn. of the fat content of biological tissues, a temp. probe (13) and pressure sensors (11,12) are arranged on the inner surface of the housing of a normal meat mincer, and are linked to the computer. Temp. probe and one pressure sensor (11) are located in the general region of the last turn of the pressure screw (3) of the mincer. Second pressure sensor (12) is located in the cutting region (1) of the mincer at the level of the last knife (7), or in the outlet perforated plate (8).

Pressure and temp. measurements are pref. compared by the computer (14) with the known characteristic curves of various test samples. Fat content of the tissue or meat can therefore be deduced and output directly by the computer.

USE/ADVANTAGE - For rapidly determining the fat content of biological tissues, esp. meat and meat prods. Allows the measurement to be made during the mincing process, and allows adjustments to the prodn. process w.r.t. the desired prod. compsn. to be made as the process is in progress.

1/1

Dwg.1/1

FS CPI GMPI
FA AB; GI
MC CPI: B04-B01B; B04-B04A3; B11-C08; B12-K04A; D02-A01; D03-K04; D05-H09; J04-C04

L68 ANSWER 3 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN **86-346650** [52] WPIDS
DNN N86-258686
TI Dietetic measurement with food weighing and nutrition computing - has keyboard and memory inputs to integral computer calculating nutrient level of amount and type of food on eight scale.
DC S02 X27

IN ATTIKOUZEL, X
PA (ATTI-I) ATTIKIOUZEL Y; (SENT-N) SENTRON LTD
CYC 18
PI WO 8607447 A 861218 (8652)* EN 21 pp
RW: AT BE CH DE FI GB IT LU NL SE
W: AU DK FR GB JP NO US
AU 8659695 A 870107 (8711)
NO 8700467 A 870413 (8721)
EP 224509 A 870610 (8723) EN
R: AT BE CH DE FR GB IT LI LU NL SE
FI 8700503 A 870206 (8744)
DK 8700612 A 870206 (8748)
JP 63500266 W 880128 (8810)
ZA 8604240 A 871207 (8812)
US 4911256 A 900327 (9018)
ADT WO 8607447 A WO 86-AU166 860606; EP 224509 A EP 86-903162 860606; JP 63500266 W JP 86-503272 860606; US 4911256 A US 87-23863 870202
PRAI AU 85-951 850607; AU 86-59695 850606
REP AU 8317256; JP 55136914; JP 57060223; DE 3338430; EP 196277; SSR880803
IC G01F000-00; G01G019-41; G01G023-22; G06F015-42
AB WO 8607447 A UPAB: 930922
The appts. includes a horizontal scale tray supported by a load cell having tare deduction features. The shallow sloping front comprises a multi-function keyboard of the sensitive type. The key-board includes alphabetic keys, command keys, and nutrient level keys. A visual display is sealed behind the transparent panel.

The apparatus is characterized by having weighing and computing facilities, with the latter comprising a central processing unit to which is connected a memory. The memory contains data corresponding to food items and their nutrient levels, together with programmed instruction for the CPU to correlate the logical periodic signals from the weighing facility with data for food items registered through the keyboard input.

USE - Determining weight and quantities of nutrient in food items as part of dietary planning and control.

0/3
FS EPI
FA AB
MC EPI: S02-D02X; X27-A02

L68 ANSWER 4 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN **86-326792** [50] WPIDS
DNN N86-247851 DNC C86-144086
TI Pigs carcass quality grading - by automatic scales and fat meat ratio meter feeding a microcomputer.
DC D12 P43 S02
IN ARNOLD, H U; HARTEL, N; LICHTERS, G
PA (LIEB-I) LIEBE R; (TEHO-N) TECH HOCH LLMENAU; (SUDT-N) VEB SUDTHURINGER FL
CYC 4
PI DE 3619349 A 861204 (8650)* 14 pp
DE 3619349 C 880310 (8810)
DD 256997 A 880601 (8842)
HU 45859 T 880928 (8843)
CS 8604163 A 890814 (8941)
ADT DE 3619349 A DE 86-3619349 860609
PRAI DD 85-278311 850705
IC A22B005-00; B07C005-10; G01B009-00; G01B021-02; G01N033-12
AB DE 3619349 A UPAB: 930922
Animal carcasses, specially pigs split in two halves, are classified by quality grade in abattoirs by a weighing machine with a digital output fed to a microcomputer. A manual instrument is guided along a straight edge to measure the relative lengths of the meat and fat bacon sections at a defined leVel of the hind limb. The computer calculates the grade and registers the result on a display and a prinerprinter, it also operates a marker for the carcass.

ADVANTAGE - This assists the work of classification and replaces the subjective judgement by an objective assessment.

0/3

FS CPI EPI GMPI

FA AB

MC CPI: D02-A01
EPI: S02-A09